5.0 LOS ANGELES-ORANGE COUNTY-SAN DIEGO CORRIDOR

The Los Angeles to San Diego via Orange County corridor has been divided into four segments:

- LA Union Station to LAX
- LA Union Station to Central Orange County (Anaheim)
- Central Orange County (Anaheim) to Oceanside
- Oceanside to San Diego

The alignments and station locations investigated for these segments are shown on Figure 5-1.

5.1 LA Union Station/Southeast LA County to LAX

5.1.1 Alignment and Station Location Options for Further Evaluation

Based on information obtained through the initial evaluation, the following alignment and station location is recommended for further evaluation (see Figure 5-2)

- **MTA Harbor Subdivision:** The Harbor Subdivision alternative follows an existing rail alignment for most of the segment from LA Union Station to LAX. The Authority previously studied this.

This is the shortest and least costly of the potential "direct" connections to LAX, it also provides the fastest travel time between Union Station and LAX (estimated at 14 minutes). However, this rail alignment would also have the significant constraint of limited right-of-way, which would require the extensive use of aerial and trench construction (through residential neighborhoods).

Station Locations:

- **LAX Terminal Station**: This potential high-speed train station site would serve the MTA Harbor Subdivision recommended for further investigation.

5.1.2 Alignment and Station Location Options to be Eliminated (No Further Evaluation)

Based on information obtained through the initial evaluation, the following alignment and station location options are those recommended to be eliminated from further evaluation (see Figure 5-3):

Alignments:

- **Interstate 405 and Interstate 10:** This alternative uses existing freeway corridors from LA Union Station to LAX. The alignment allows for the possibility of adding a station to serve west Los Angeles communities in the future.

This is the longest and second most costly of the potential connections to LAX. This freeway alignment, would have the significant constraint of limited right-of-way on the freeways, which would require the exclusive use of aerial construction. Third or fourth level aerial construction would be required along much of the I-10 and I-405 freeways due to elevated freeway segments and freeway interchanges along these rights-of-way. This freeway alignment would also require relocating and maintaining freeway access and capacity during construction. It is particularly difficult to find available space along the freeway alignments since available right-of-way is planned for use for needed expansion projects such as additional lanes, high-occupancy vehicle (HOV) lanes and additional interchange improvements.

The Interstate 405/Interstate 10 alternative travels through areas housing significant minority and low-income populations, raising significant environmental justice issues – these are of particular concern since the high-speed trains are not proposed to stop between Union Station and LAX. This alignment has the highest social and economic resources impacts, and high impacts to cultural resources.

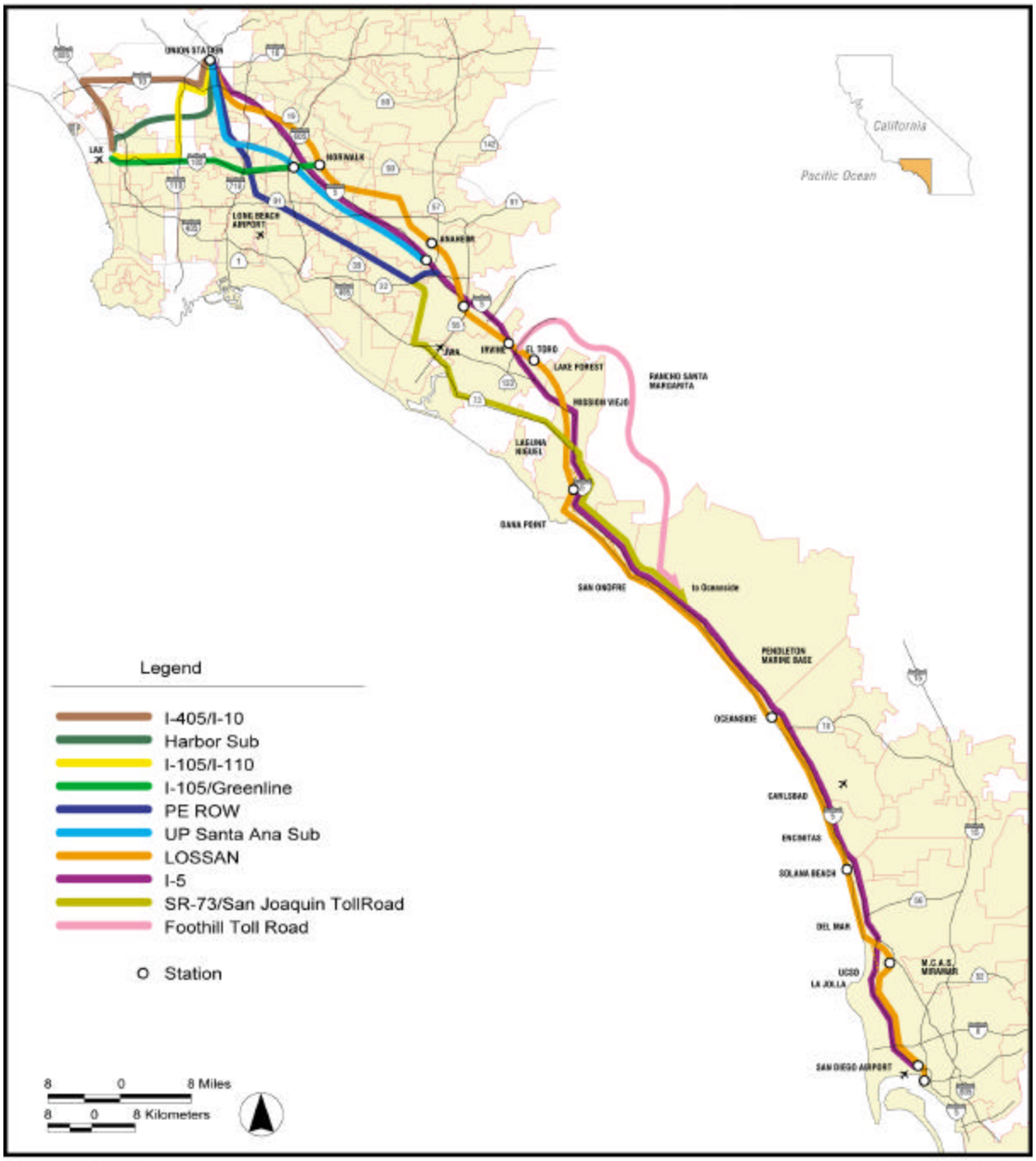
- **Interstate 105 and Interstate 110:** This is a southern freeway alignment alternative connection from LA Union Station to LAX. This option would be a dedicated high-speed system.

This is the second longest and most costly of the potential connections to LAX. This freeway alignment would have the significant constraint of limited right-of-way on the freeways, which would require the exclusive use of aerial construction. Third or fourth level aerial construction would be required along the I-105 and I-110 freeways due to elevated freeway segments (particularly HOV viaducts along the I-105), and freeway interchanges along these rights-of-way. This freeway alignment would also require relocating and maintaining freeway access and capacity during construction. It is particularly difficult to find available space along the freeway alignments since available right-of-way is planned for use for needed expansion projects such as additional lanes, high-occupancy vehicle (HOV) lanes and additional interchange improvements.

The Interstate 105 and Interstate 110 alternative travels through areas housing significant minority and low-income populations, raising significant environmental justice issues – these are of particular concern since the high-speed trains are not proposed to stop between Union Station and LAX. This alignment has the highest social and economic resources impacts, and high impacts to cultural resources.

- **Upgrade MTA Green Line to Support High-Speed Trains:** This option requires upgrading the existing MTA Green Line to allow for higher speed trains to operate shared-use with light rail.

The option that considers shared-use of the Green Line tracks by HSR trains has significant regulatory and operational barriers, and would be no faster than transferring to the Green Line for passengers, as high-speed trains would be constrained to run between scheduled Green Line trains. Capital costs for this alternative were not developed since it would require completely reconstructing the existing LRT alignment, stations, and potentially parts of I-105. This alternative should be eliminated since the "no build" option of transferring to an extended MTA Green Line is a less costly, more feasible alternative.



Source: IBI Group

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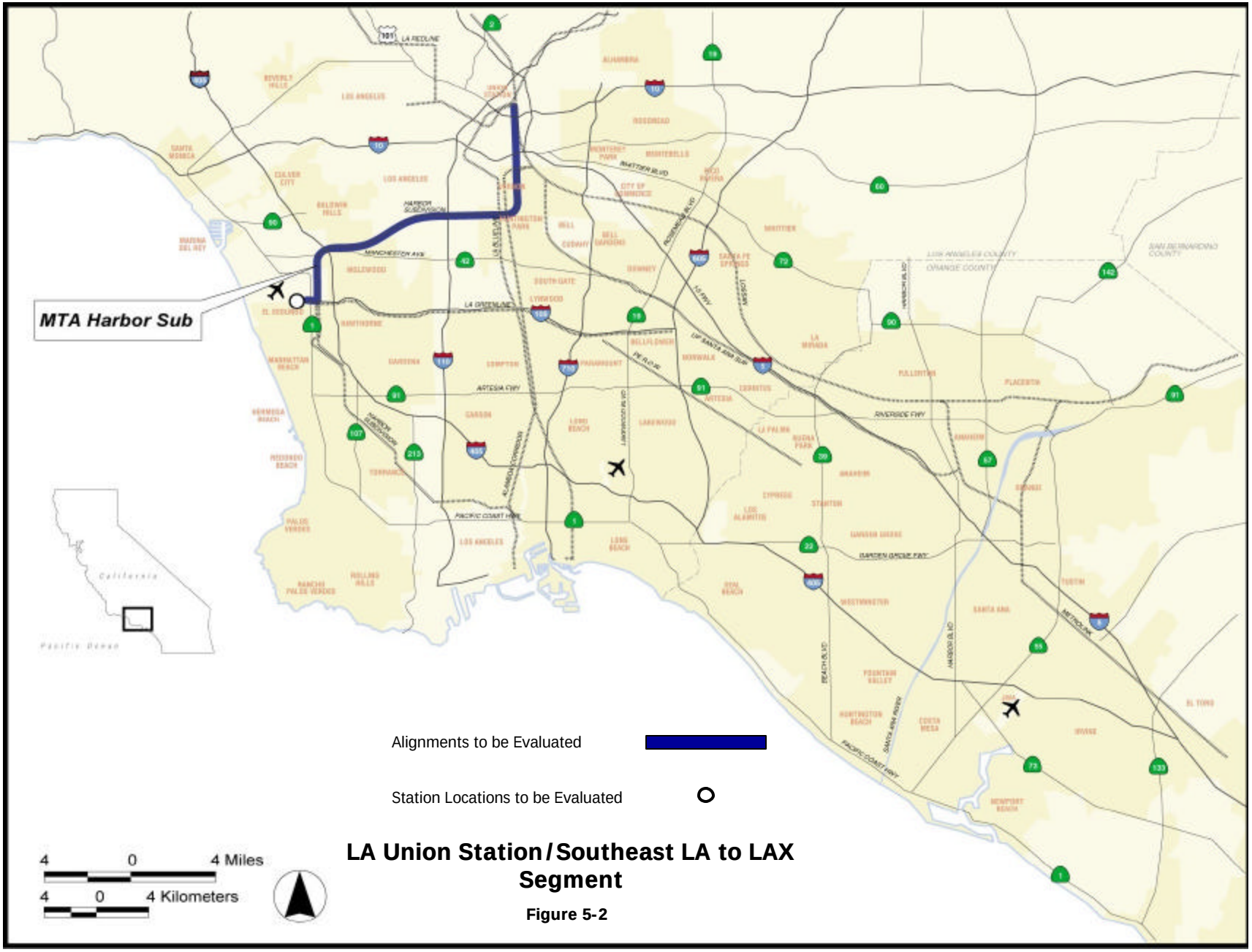
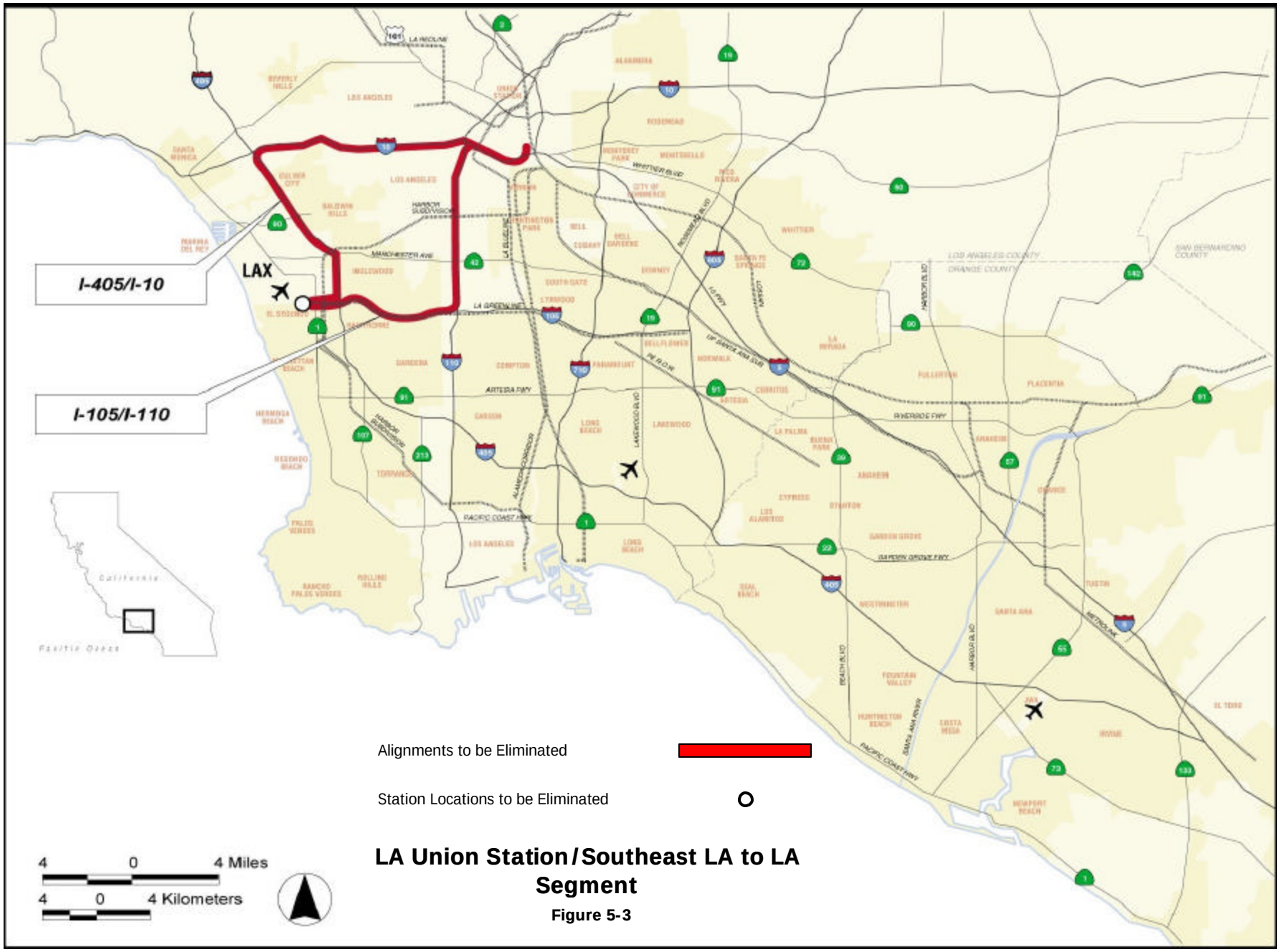
Proposed Alignment and Station Options

Figure 5-1



LA Union Station/Southeast LA to LAX Segment

Figure 5-2



LA Union Station/Southeast LA to LA Segment

Figure 5-3

5.2 LA Union Station to Central Orange County (Anaheim)

5.2.1 Alignment and Station Location Options for Further Evaluation

Based on information obtained through the initial evaluation, the following alignment and station location options are recommended for further evaluation (see Figure 5-4):

Alignments:

- **LOSSAN Corridor:** This option would use the existing LOSSAN rail line from southeast LA to Anaheim. A wide range of improvement is possible within this corridor. However, most of the corridor would still be constructed at-grade. The lowest level of improvement for this alternative would include a minimum of three main tracks between LA Union Station and Fullerton, while the highest level of improvement would include 4 tracks, to increase capacity and reliability of the rail corridor for high-speed trains and other rail traffic. The highest level of improvement would also include full grade-separation, bypass tracks at all stations, and the possibility of electrification. Under the lowest level of improvement, all existing Amtrak stations would be served. Station options for additional express for the highest level of improvement would include LA Union Station, Norwalk (Metrolink Station) and Anaheim (Amtrak/Metrolink Station at Edison Field).

Since it involves incremental upgrades to an existing system rather than building a new system, LOSSAN Corridor provides by far the least costly of the options in this segment – between $800 million and $1.6 billion less than the dedicated options. LOSSAN Corridor alternatives would also maximize connectivity and accessibility and compatibility with existing and planned development. The LOSSAN Corridor is an existing rail corridor that can be incrementally improved. Improvements to this corridor would benefit both existing intercity and commuter services. Although express travel times on the LOSSAN corridor could be similar to dedicated route alternatives (alternatives that would not share tracks with other services), reliability and frequency of service for these alternatives are likely to be negatively impacted by sharing tracks with other services.

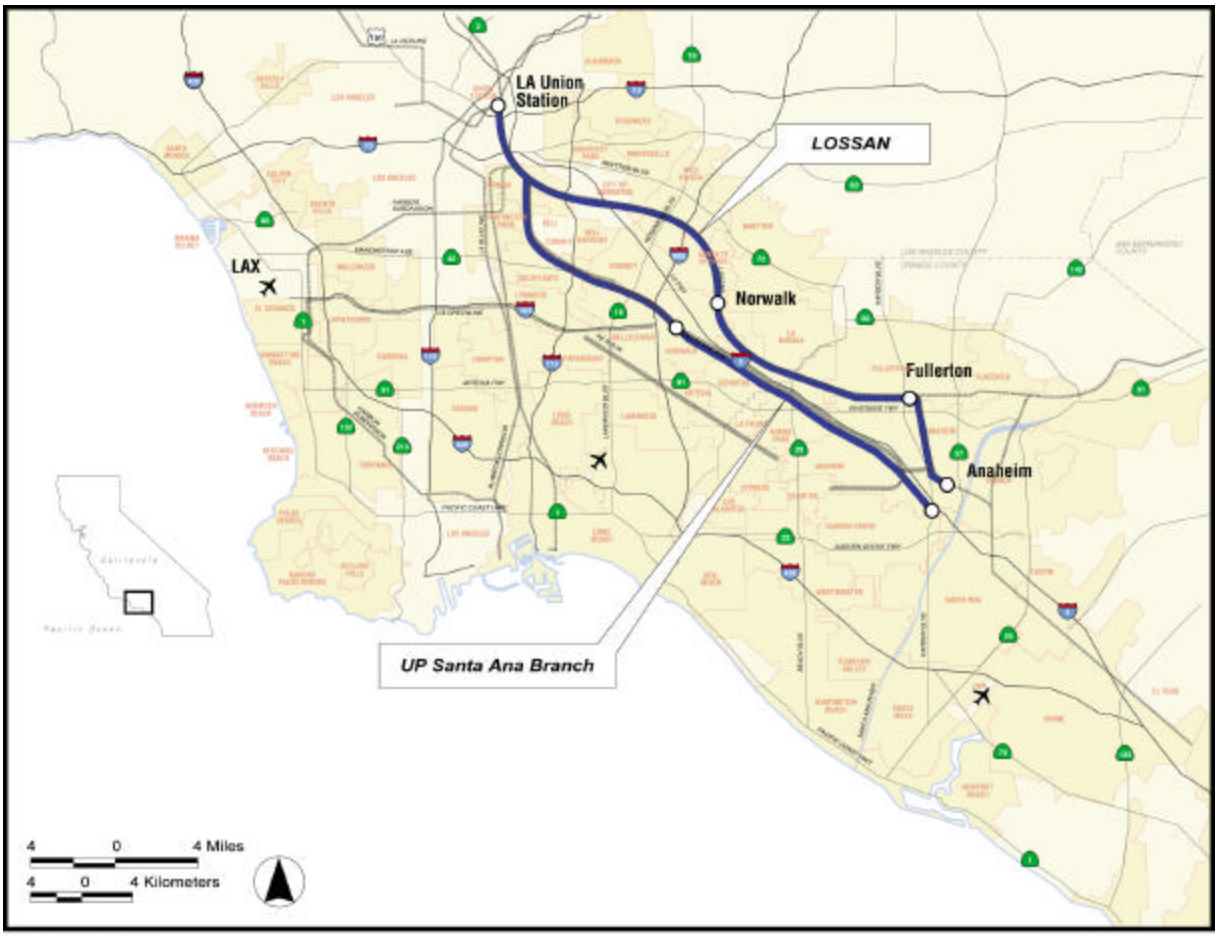
- **Union Pacific Santa Ana Branch Line:** This option would use an existing Union Pacific (UP) branch line from southeast LA to Anaheim, where it would connect back to I-5 alignment. Station options for the Union Pacific Santa Ana Branch Line include LA Union Station, Norwalk (UP Branch at Imperial Highway) and Anaheim (I-5).

The UP Santa Ana Branch Line is the least costly of the three dedicated route options, since it traverses largely industrial and commercial areas where at-grade operations are more feasible. It would provide a Central Orange County station in Anaheim. It would also have the least potential environmental impacts of the dedicated route alternatives. However, this option also has the highest incidence of minority populations of the three dedicated alignments, particularly through the cities of Vernon, Downey and Norwalk.

This option would provide travel times that are similar to or slightly better than the LOSSAN Corridor. Travel times for the UP Santa Ana Branch Line alternative are more certain, since high-speed trains would not be sharing tracks with any other traffic. This option also assures the possibility of no-transfer operations at LA Union Station. The potential for significant environmental impact is higher for this dedicated route option than the LOSSAN alternative due to the more extensive construction required relative to the incremental upgrading of an existing facility.

Station Locations:

- **LA Union Station:** This potential high-speed train station would serve both the LOSSAN Corridor and the UP Santa Ana Branch Line.



Source: IBI Group

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Legend

Alignments to be Evaluated

Station Locations to be Evaluated

Alignment and Station Locations to be Evaluated
LA Union Station to Central Orange County

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Figure 5-4

- **Norwalk (Metrolink Station):** This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services.

- **Norwalk (UP Branch at Imperial Highway)**: This potential station would serve the UP Santa Ana Branch Line alternative.

- **Anaheim (Edison Field Amtrak/Metrolink):** This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services. Further investigation is required to determine whether this site could also serve the UP Santa Ana Branch Line.

- **Anaheim (I-5):** This potential station would serve the UP Santa Ana Branch Line alternative. This potential station offers the possibility of a direct connection to the Disney Resort Transportation Center. Locating this potential site along I-5 requires additional coordination with OCTA and the City of Anaheim.

- **Fullerton (Amtrak Station):** This LOSSAN station would serve an improved Amtrak service.

5.2.2 Alignment and Station Location Options to be Eliminated (No Further Evaluation)

Based on information obtained through the initial evaluation, the following alignment and station location options are recommended to be eliminated from further evaluation (see Figure 5-5):

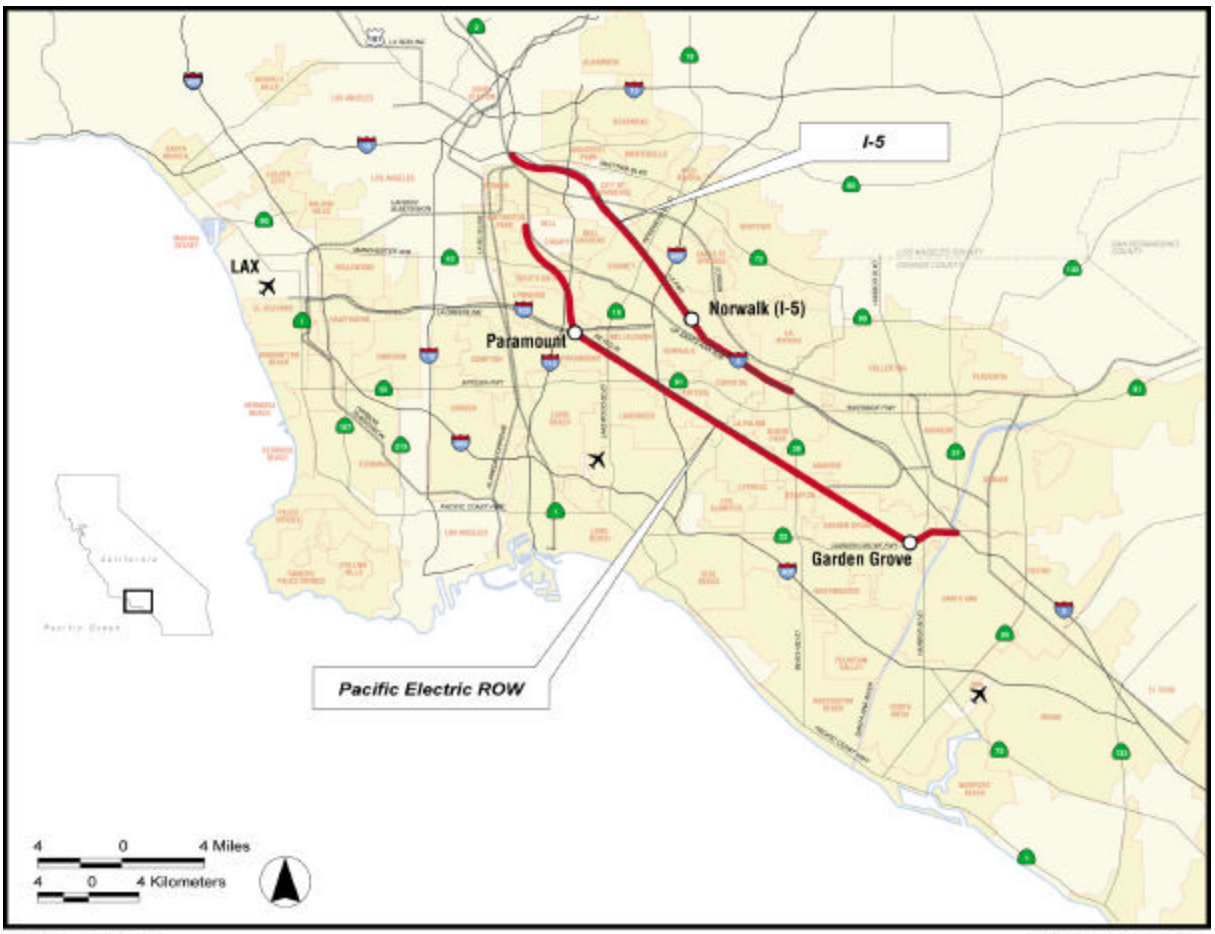
Alignments:

- **Interstate 5 Freeway:** This alignment would follow I-5 south of the US-101/I-5/I-10/SR-60 interchange (East LA interchange) and involves a dedicated bypass of the freight and commuter rail corridor, and a reasonably direct alignment to Central Orange County.

Of the three dedicated options, the I-5 Freeway alternative is the slowest, due to the number and size of curves on the I-5 alignment. It is the second most expensive, due to extremely constrained right-of-way in the corridor, requiring high aerial construction. It would provide a Central Orange County station in Anaheim, which would have good freeway access and intermodal transit connections. Third or fourth level aerial construction would be required along the I-5 freeway due to elevated freeway segments and freeway interchanges along this right-of-way. This freeway alignment would also require relocating and maintaining freeway access and capacity during construction. It is particularly difficult to find available space along this freeway alignment since available right-of-way is planned for use for needed expansion projects such as additional lanes, high-occupancy vehicle (HOV) lanes and additional interchange improvements.

- **Pacific Electric Right-of-Way:** This alignment is a lightly used rail line between Paramount and Stanton, and an abandoned corridor through to Santa Ana. Its long tangent sections could support high-speed train operation.

The PE Right-of-Way provides slightly faster travel times than the other alternatives, due primarily to its straightness. However, it is also the longest route, and the most expensive, due to long sections of abutting residential areas that would likely require trenched construction to mitigate impacts. This alternative is not as accessible as the UP Santa Ana Branch Line alternative, since it is convenient to only a single freeway and it does not directly serve Anaheim. The Garden Grove station site, like much of the



Source: IBI Group September 4, 2001

Legend

Alignments to be Eliminated

Station Locations to be Eliminated

Alignment and Station Locations to be Eliminated
LA Union Station to Central Orange County

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Figure 5-5

alignment, is in a residential neighborhood. Both the Orange County Transportation Authority and the Gateway Cities of Southeast LA County are currently studying this corridor as a potential local transit corridor. The Gateway Cities have expressed that this corridor is more appropriate for local transit.

Station Locations:

- **Paramount (San Pedro Branch at I-105):** This potential station site would only serve the PE Right-of-Way alternative that staff recommends be eliminated from further investigation.

- **Norwalk (I-5 at Imperial Highway)**: This potential station site would only serve the Interstate 5 Freeway alternative that staff recommends be eliminated from further investigation.

- **Garden Grove (PE ROW at SR-22):** This potential station site would only serve the PE Right-of-Way alternative that staff recommends be eliminated from further investigation.

5.3 Central Orange County (Anaheim) to Oceanside

5.3.1 Alignment and Station Location Options for Further Evaluation

Based on information obtained through the initial evaluation, the following alignment and station location options are recommended for further evaluation (see Figure 5-6):

Alignments:

- **LOSSAN Corridor:** This option would use the existing LOSSAN rail line from Anaheim to Oceanside. A wide range of improvement is possible within this corridor. The lowest level of improvement for this alternative includes upgrades within the corridor, including grade-separation at San Juan Capistrano and San Clemente. Due to physical constraints, visual and environmental impacts, and community concerns, elevated railway viaduct structures (except at water crossings) along the beachfront and in the San Juan Capistrano historical area will not be investigated. The highest level of improvement includes upgrades and bypass alignments around the environmentally sensitive coastal communities and regions of south Orange County, including San Juan Capistrano and San Clemente. Under the lowest level of improvement, all existing Amtrak stations would be served. Station options for additional express service, for the highest level of improvement, include the Irvine Transportation Center (ITC) and the Oceanside Transportation Center (OTC).

Since it involves incremental upgrades to an existing system rather than building a new system and can be constructed mostly at-grade, LOSSAN Corridor provides by far the least costly of the options in this segment – between $1 billion and $2.5 billion less than the dedicated options. LOSSAN Corridor alternatives would also maximize connectivity and accessibility. A greater capital cost is required for the highest level of improvement, however it provides more environmental mitigation by taking the tracks "off the beach" in San Clemente, and out of the historical downtown of San Juan Capistrano, and also straightens two slow curves in Orange and Dana Point. The LOSSAN Corridor is an existing rail corridor that can be incrementally improved. Improvements to this corridor would benefit both existing intercity and commuter services. Although express travel times on the LOSSAN corridor could be similar to dedicated route alternatives, reliability and frequency of service for these alternatives are likely to be negatively impacted by sharing tracks with other services.

Since Irvine is the southernmost potential high-speed train station location in Orange County, and electrification/shared use operations on the LOSSAN Corridor are not recommended for further

investigation through San Diego, electrification and shared use of the LOSSAN corridor (with high-speed trains) should only be further evaluated between Union Station and Irvine. High-speed train passengers from San Diego to locations north of LA Union Station, traveling in non-electrified trains, would need to transfer to the electrified high-speed train system in Orange County or LA Union Station.

Station Locations:

- **Irvine Transportation Center (ITC):** This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services.
- **Oceanside Transportation Center (OTC):** This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services.
- **Santa Ana (Amtrak):** This LOSSAN station would serve an improved Amtrak service.
- **San Clemente (Amtrak):** This LOSSAN station would serve an improved Amtrak service.
- **San Juan Capistrano (Amtrak):** This LOSSAN station would serve an improved Amtrak service.

5.3.2 Alignment and Station Location Options to be Eliminated (No Further Evaluation)

Based on information obtained through the initial evaluation, the following alignment and station location options are recommended to be eliminated from further evaluation (see Figure 5-7):

Alignments:

- **Interstate 5 Freeway:** This alignment continues from Anaheim along I-5 in Orange County through Camp Pendleton to Oceanside, providing a dedicated high-speed alignment and bypassing constrained sections of the LOSSAN corridor. The station options for I-5 are Irvine (I-5 at Jeffrey Road) and Oceanside (I-5 at Oceanside Boulevard).

The Interstate 5 (I-5) alternative is the fastest of the dedicated options. It is also the costliest, since the number and size of horizontal and vertical curves on I-5 require extensive aerial and tunnel construction to maintain speeds. Third or fourth level aerial construction would be required along much of the I-5 freeway due to elevated freeway segments and freeway interchanges along this right-of-way. This freeway alignment would also require relocating and maintaining freeway access and capacity during construction. It is particularly difficult to find available space along this freeway alignment since virtually all available right-of-way has been used for recent expansion projects such as additional lanes, high-occupancy vehicle (HOV) lanes, viaduct structures, and additional interchange improvements. This option does avoid the sensitive areas in San Juan Capistrano and San Clemente, although there is the potential for impact alongside the I-5 corridor, which is abutted by commercial and industrial uses in both areas.

- **San Joaquin Corridor (SR-73) with Interstate 5:** This is a dedicated alignment option, continuing from the PE right-of-way in Garden Grove. This is a southern highway alternative to Option C2 (which follows I-5 through Santa Ana, Tustin, and Irvine), and passes through some less developed parts of Orange County.

The SR-73 alternative is almost as expensive as the I-5 option. Due to its rolling terrain, it requires extensive tunneling. The SR-73 alternative is not as accessible as the LOSSAN and I-5 alternatives, since it is convenient to only a single freeway. Moreover, this alternative would not serve either Anaheim or Irvine and it only connects to the PE right-of-way alignment (between Union Station and Central Orange County) that is not recommended for further evaluation.

- **Interstate 5 and Foothill Corridor (SR-241):** This alternative would use the right-of-way of the existing and proposed alignments of the SR-241 Toll Road in eastern Orange County. This alignment option would bypass the coastal communities of southern Orange County and join I-5 alignment from San Onofre to Oceanside.

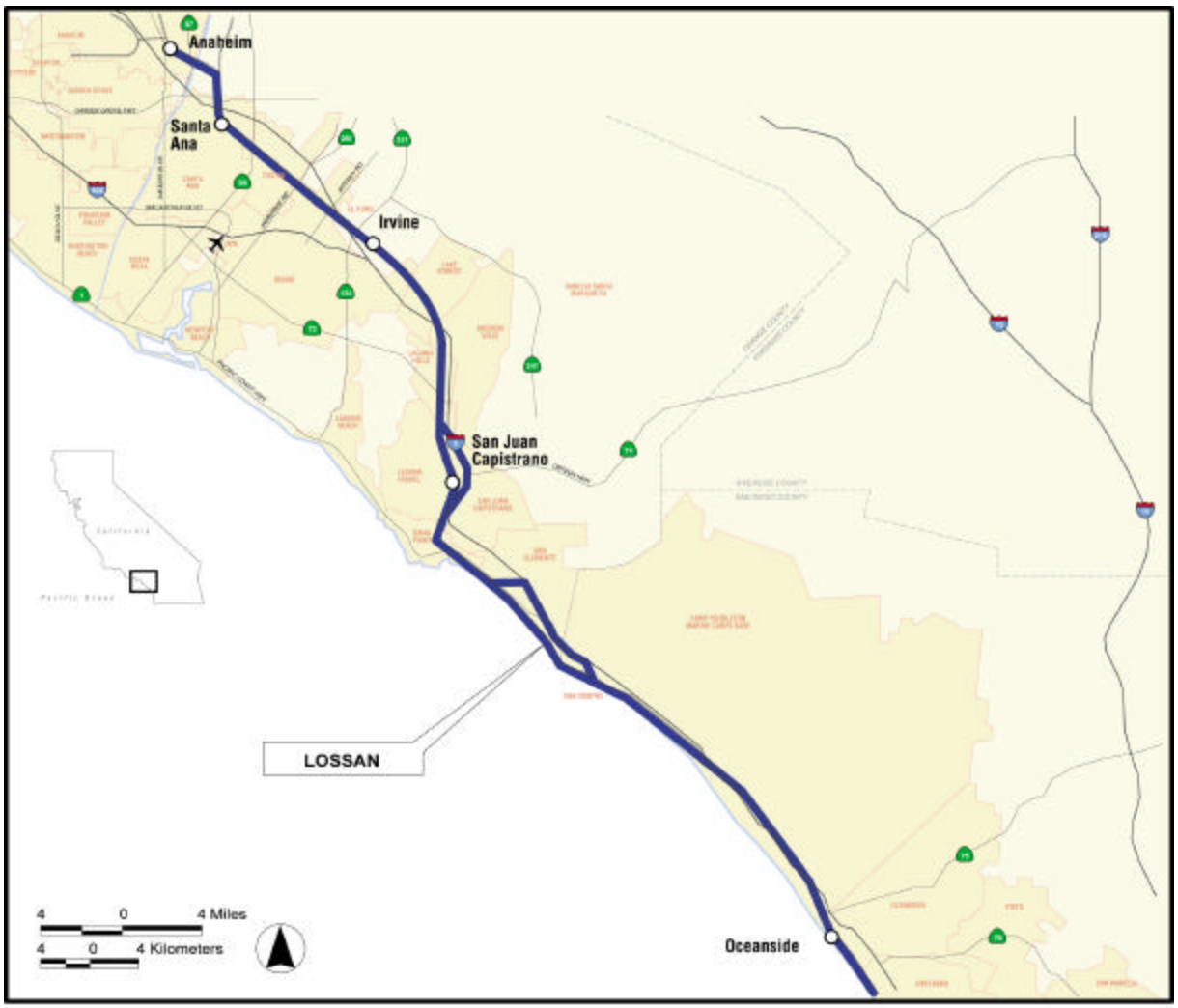
The Foothill Corridor (SR-241) alternative depends on the extension of the Foothill corridor, a toll road project that is both environmentally controversial and uncertain. Although several alternatives are being investigated for the potential extension of the toll road, only one of these alternatives avoids the sensitive beach areas in San Clemente. The one option that does avoid the sensitive beach areas requires the creation of a new transportation corridor in an environmentally sensitive/undeveloped canyon in San Clemente. It is also the longest and slowest of the dedicated alternatives, with significant gradients. It is expected to cost at least $1 billion more that the most expensive LOSSAN alternative.

The Foothill Corridor (SR-241) alignment investigated assumed the infrastructure to be exclusively used by high-speed trains. Therefore, San Clemente would still be faced with the existing issues/rail impacts in the LOSSAN corridor. The cumulative impacts of the two corridors would be far greater than a single alternative along the LOSSAN corridor. If a new high-speed train infrastructure was built along the Foothill Corridor, it is almost certain that some coastal residents would want the new high-speed train alignment to be used by all rail services. This is neither realistic nor feasible. In addition to diminishing the performance of a high-speed train, and raising questions about the cost-effectiveness of building a completely new infrastructure that is not fully dedicated to high-speed service, it would mean forcing the relocation of all existing Amtrak, freight and commuter rail stations into the Foothill Corridor. The Authority/State would have no ability to force such relocations. Moreover, additional services along the Foothill Corridor would greatly increase the cost of building the infrastructure because of additional commuter stations, additional track requirements, and restrictive freight gradients. If a typical maximum freight gradient of 1.2% were applied, about 20-miles/32.2 km of tunnel would be required for this alignment.

Station Locations:

- **Irvine (I-5 at Jeffrey Road):** This station would only serve the I-5 Freeway and I-5 and Foothill Corridor alternatives that are not recommended for further investigation.

- **Oceanside (I-5 at Oceanside Boulevard):** This station would only serve the I-5 Freeway, I-5 and Foothill, and SR-73 and I-5 alternatives that are not recommended for further investigation.



Source: IBI Group September 4, 2001

Legend

Alignments to be Evaluated

Station Locations to be Evaluated

NOTE: Electrification options to be studied from LA Union Station to Irvine only.

Alignment and Station Locations to be Evaluated
Central Orange County (Anaheim) to Oceanside

Figure 5-6

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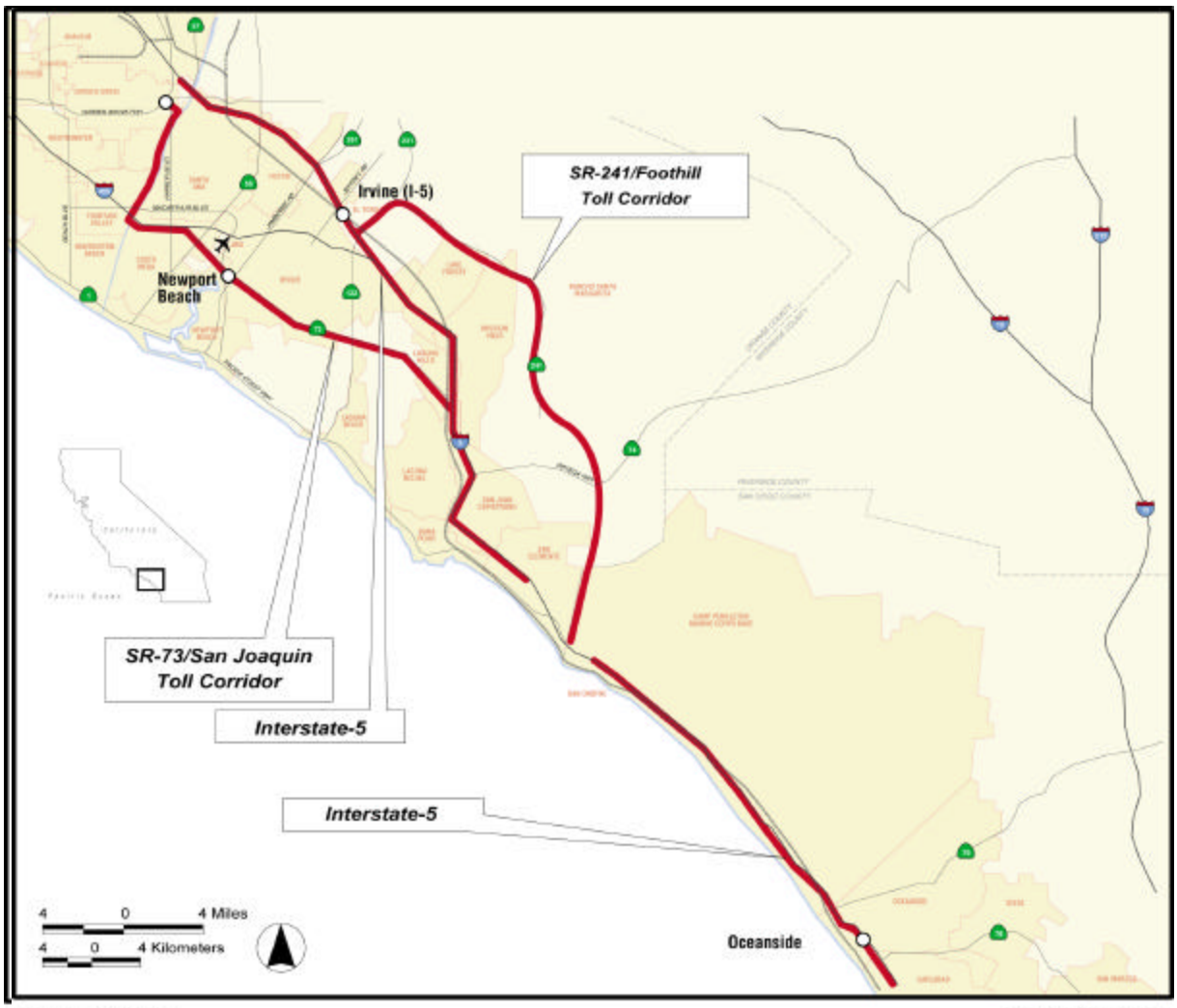

Source: IBI Group

September 4, 2001

Legend

Alignments to be Eliminated

Station Locations to be Eliminated

Alignment and Station Locations to be Eliminated
Central Orange County (Anaheim) to Oceanside

Figure 5-7

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5.4 Oceanside to San Diego

5.4.1 Alignment and Station Location Options for Further Evaluation

Based on information obtained through the initial evaluation, the following alignment and station location options are those recommended for further evaluation (see Figure 5-8):

Alignments:

- **LOSSAN Corridor:** This option would use the existing LOSSAN rail line from Oceanside to San Diego. A wide range of improvement is possible within this corridor. The lowest level of improvement for this alternative includes the tunnel under University Towne Centre (UTC) from the *Corridor Evaluation Study*[1]. The highest level of improvement includes a tunnel under Camino Del Mar, and a more direct tunnel alignment under I-5 instead of UTC, to increase speed. For the lowest level of improvement, all existing Amtrak stations would be served, and there would be a new station at University Towne Centre (La Jolla Village Drive and Genesee Avenue). Station options for additional express service, for the highest level of improvement, include Solana Beach (Amtrak/Coaster Station), San Diego Airport (proposed Intermodal Transportation Center) and the Santa Fe Depot in downtown San Diego. Due to visual and environmental impacts, and community concerns, elevated railway viaduct structures (except at water crossings and roadway crossings) along the beachfront and environmentally sensitive coastal communities will not be further investigated.

The lowest level of improvement for the LOSSAN Corridor is mostly at-grade and is the least costly, about $1.2 billion less than the I-5 option. The highest level of the LOSSAN Corridor investigated involves extensive trenching and tunneling and nears the cost of a dedicated I-5 high-speed train option. The LOSSAN Corridor maximizes connectivity and accessibility. The extra capital cost for the highest level of improvement provides a higher level of environmental mitigation by providing grade separations through Oceanside, Carlsbad, Encinitas, and downtown San Diego, and by moving the tracks away from the unstable bluffs at Del Mar. The LOSSAN Corridor is an existing rail corridor that can be incrementally improved. Improvements to this corridor would benefit both existing intercity and commuter services.

Although express travel times on the LOSSAN corridor could be similar to dedicated route alternatives, reliability and frequency of service for these alternatives are likely to be negatively impacted by sharing tracks with other services.

From Irvine to San Diego, only non-electrified steel-wheel-on-steel-rail high-speed train systems should be further investigated. The travel time differential between non-electrified and electrified high-speed train technology in not significant along this heavily constrained right-of-way. For express service between Irvine and San Diego (78 miles/125.6 km), electrified high-speed trains would only reduce fossil fuel travel times by less than 3 minutes. Moreover, the visual impacts of overhead catenary are not acceptable to the coastal communities. The prior "bullet train" proposal and feasibility studies of the Intercity High-Speed Train Commission and the Authority as well as this environmental work have demonstrated the vocal opposition to the overhead catenary needed for the electrified high-speed train technology. The consensus in the San Diego region (SANDAG, transportation agencies, cities and the public) is that the LOSSAN corridor should be an incrementally improved non-electrified service (that would require a transfer to the statewide high-speed train network) and that the I-15 corridor would provide direct, high-speed train service on new infrastructure to San Diego via the Inland Empire.

[1] Parsons Brinckerhoff. *California High-Speed Rail Corridor Evaluation.* Prepared for California High-Speed Rail Authority, December 1999.

Station Locations:

- **University Towne Center (La Jolla Village Drive and Genesee Avenue)**: This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services.

- **Solana Beach (Amtrak):** This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services.

- **San Diego Airport:** This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services.

- **Santa Fe Depot:** This LOSSAN station would serve an improved Amtrak service, and could be expanded to serve new express intercity services.

5.4.2 Alignment and Station Location Options to be Eliminated (No Further Evaluation)

Based on information obtained through the initial evaluation, the following alignment and station location options are those recommended to be eliminated from further evaluation (see Figure 5-9):

Alignment:

- **Interstate 5 Freeway**: This alignment continues from Oceanside along I-5 to San Diego, providing a dedicated high-speed alignment and bypassing of sensitive coastal and other constrained sections of the LOSSAN corridor. This is the only option for a dedicated high-speed alignment along the coast in San Diego.

The I-5 Freeway dedicated option provides a travel time similar to the LOSSAN options, but does not serve the downtown Santa Fe Depot and therefore must terminate at the San Diego Airport. I-5 is the costliest option, since the number and size of horizontal and vertical curves on I-5 require extensive aerial structures to maintain speeds. Third or fourth level aerial construction would be required along much of the I-5 freeway due to elevated freeway segments and freeway interchanges along this right-of-way. This freeway alignment would also require relocating and maintaining freeway access and capacity during construction. It is particularly difficult to find available space along this freeway alignment since available right-of-way is planned for use for needed expansion projects such as additional lanes, high-occupancy vehicle (HOV) lanes and additional interchange improvements. This option avoids the sensitive coastal areas. However, in many places, particularly at lagoon crossings, it is not very distant from the coast, and shares many of the environmental issues and sensitivities of the LOSSAN corridor. Due to the constrained right-of-way along the I-5 corridor, there exists the potential for impact to adjacent land uses, which are predominately commercial and industrial but include significant residential areas. Due to the need for aerial construction, there is significant potential for visual intrusion, particularly interference with ocean and lagoon views.

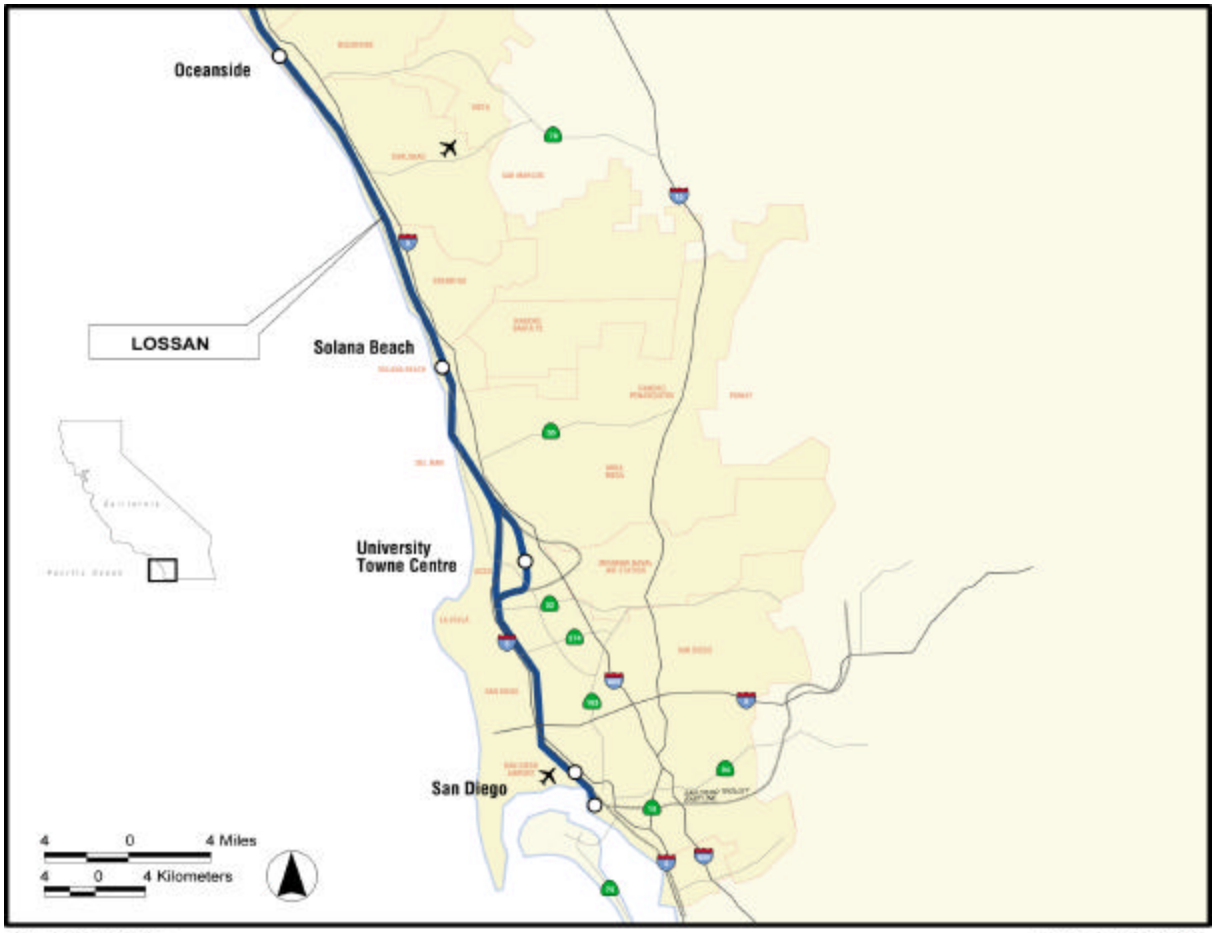
Station sites on the I-5 alignment would be very problematic. Suitable land for stations is scarce, and the development of such new stations would be incompatible with the emerging Smart Growth principles of San Diego County, which stress the support and development of existing transportation hubs. Therefore, this alternative is not as compatible with the existing and planned development of the coastal cities as the LOSSAN corridor.

The I-5 alignment investigated has assumed the infrastructure to be exclusively used by high-speed trains. Therefore, coastal communities would still be faced with the existing issues/rail impacts in the LOSSAN corridor, and would in fact be hosting two parallel rail lines. The cumulative impacts of the two corridors would be far greater than a single alternative along the LOSSAN corridor. If a new high-speed

train infrastructure was built along the I-5, it is almost certain that some coastal residents would want the new I-5 high-speed train alignment be used by all rail services. This is neither realistic nor feasible. In addition to diminishing the performance of a high-speed train, and raising questions about the cost-effectiveness of building a completely new infrastructure that is not fully dedicated to high-speed service, it would mean forcing the relocation of all existing Amtrak, freight and commuter rail stations into the I-5 corridor. The Authority/State would have no ability to force such relocations. There is no reason to believe that the existing commuter and Amtrak services would be willing to move to a corridor that would not serve their markets as well as the LOSSAN Corridor. Moreover, not only would additional services along the I-5 cause significant disruption to abutting land uses (and increase environmental impacts), it would greatly increase the cost of building the infrastructure because of additional commuter stations, additional track requirements, and restrictive freight gradients.

Station Location:

Solana Beach (I-5 at Lomas Santa Fe Drive): This potential station would only the I-5 alignment that is not recommended for further evaluation.



Source: IBI Group

September 4, 2001

Legend

Alignments to be Evaluated

Station Locations to be Evaluated

NOTE: Non-electric high-speed train technology only to be considered in this segment.

Alignment and Station Locations to be Evaluated
Oceanside to San Diego

Figure 5-8

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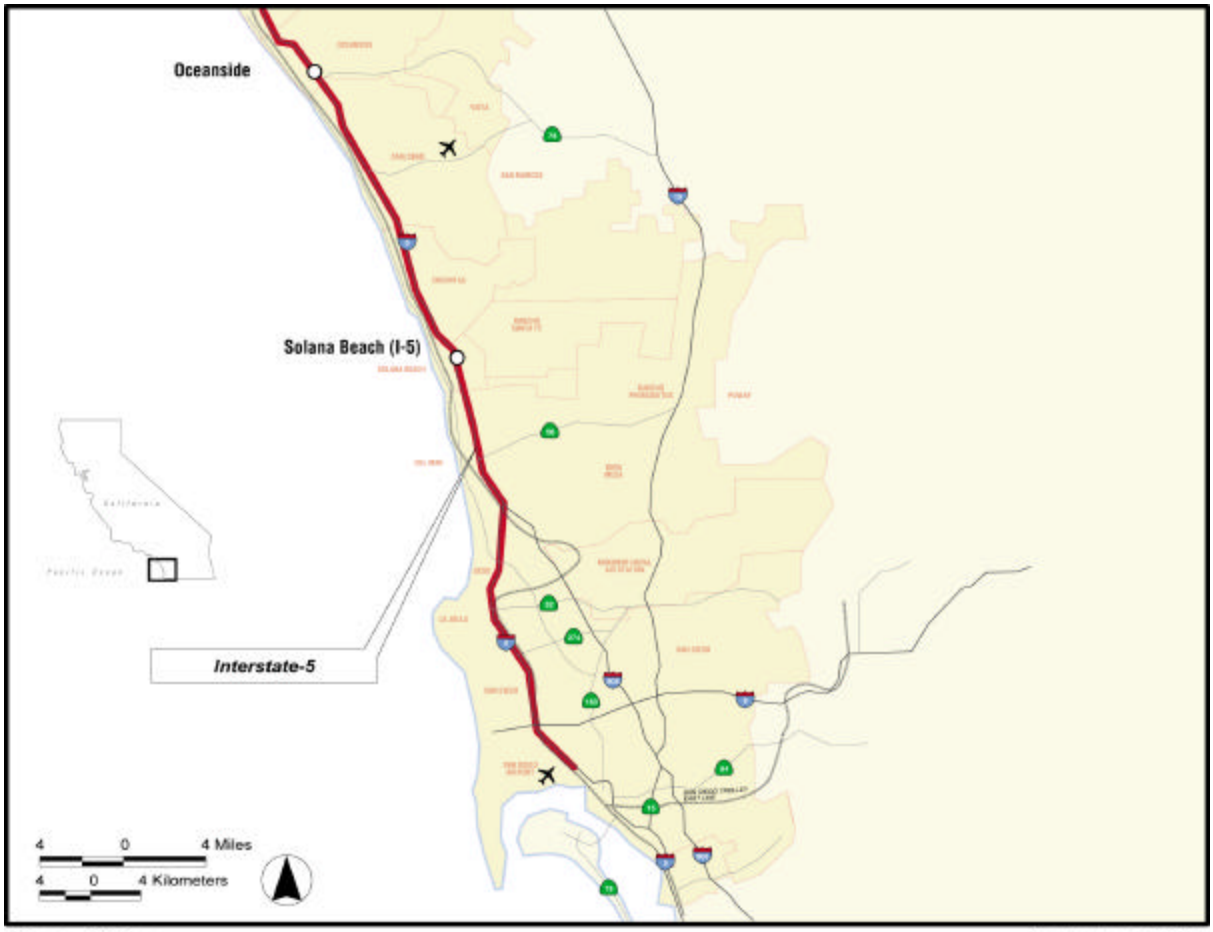

Source: IBI Group

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Legend

Alignments to be Eliminated

Station Locations to be Eliminated

Alignment and Station Locations to be Eliminated
Oceanside to San Diego

Figure 5-9

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